

hp smart array 641/642 controller installation overview



System Requirements

For information about server compatibility and a complete list of supported operating systems, refer to

www.hp.com/products/smartarray.

For a current list of the hard drives supported by this controller, refer to

www.hp.com.

Safety Information



WARNING: To reduce the risk of personal injury or damage to the equipment, consult the safety information and user documentation provided with your server before attempting the installation. Many servers are capable of providing energy levels that are considered hazardous, and are intended to be serviced by qualified personnel trained to deal with these hazards. Do not remove enclosures or attempt to bypass any interlocks that may be provided for the purpose of removing these hazardous conditions.

Regulatory Notice

The rating label on the device gives the class (A or B) of the equipment.

- Class A devices do not have an FCC logo or ID on the label.
- Class B devices have an FCC logo or ID on the label.

After you have determined the device class, refer to the *HP Smart Array 641/642 Controller User Guide* for complete regulatory compliance notices. This user guide is present in the controller kit either as a printed copy or as a file on the Controller Products Documentation CD.

Getting Help

If you cannot find the information that you need in this overview, there are several other resources that you can use to get more detailed information.

- The *HP Smart Array 641/642 Controller User Guide*
- www.hp.com
- Your nearest HP authorized reseller (locations and telephone numbers of these resellers are given on www.hp.com)
- HP technical support telephone numbers.
 - In North America, 1-800-652-6672
 - For other regions, the telephone numbers are given on www.hp.com

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Kit Contents

1. Smart Array 641 or 642 Controller

2. SmartStart CD

If this item is not provided, the Support Software Kit is provided instead.

This CD contains:

- Documentation files and demonstrations for SmartStart and Insight Manager software
- Device drivers and support software for the controller
- Rack Builder utilities
- Array Configuration Utility (ACU)
- ROM Update Utility
- Server Diagnostics
- Management Agents

3. Support Software Kit

The CD and diskettes in this kit contain:

- Device drivers and support software for the controller
- System Configuration Utility (SCU)
- Array Configuration Utility (ACU)

4. Controller Products Documentation (CPD) CD

The CPD CD is provided with all new HP controllers. It contains user documentation files for all HP controllers, and is updated as new products are released. If you buy another HP controller in the future, you may get a newer version of the CPD CD.

The documentation files are formatted for viewing and printing with Adobe Acrobat Reader, which is also provided on the CPD CD. When you load the CPD CD, an installation wizard opens and leads you through the installation of Acrobat Reader on your system.

5. Printed Documentation

- Installation Overview
- Warranty Card
- Other documents, as necessary, to give updated information about the controller

In some countries, the option kit also contains a printed copy of the *HP Smart Array 641/642 Controller User Guide*.

About the Installation Procedure

The reverse side of this poster describes the procedure for installing the controller in a **new system**.

If you are installing the controller in an **existing system**, the procedure is similar. However, you must perform the steps in the following sequence:

1. Back up the data on your system (this is **mandatory** if you are updating from any controller other than a Smart Array controller).
2. Update the system firmware (Section 2).
3. If you are going to set the controller as the boot device, install the device driver for the operating system (Section 6). (If the controller is **not** going to be the boot device, postpone installation of the device driver until a later step, as indicated.)
4. Install the controller hardware (Section 1).
5. Set the controller order (Section 4).
6. Update the controller firmware (Section 2).
7. If you are using the System Configuration Utility, update the system partition (Section 3) and then check that the controller order is unchanged (Section 4).
8. If you are not going to set the controller as the boot device, install the device driver (Section 6).

Installation in the existing system is complete at this point. You may now:

- Update Insight Manager and the Management Agents if new versions are available at www.hp.com/servers/manage/. Refer to the Insight Manager documentation for detailed instructions.
- Create, modify, and format additional logical drives as desired.
- Restore data from backup if you are upgrading from a non-Smart Array controller.

Installation Procedure

Before you begin, confirm that you have the latest version of each driver and utility file needed. Refer to

www.compaq.com/support/files

and compare the version numbers of the files there with those of the same files on the software CD that is supplied in the controller kit.

If you are installing the controller in an existing system, read the section "About the Installation Procedure" on the other side of this poster.

For more detailed information about any step in the installation sequence, refer to the *HP Smart Array 641/642 Controller User Guide*.

1. Installing the Hardware



WARNING: To reduce the risk of personal injury or damage to the equipment:

- Do not disable the power cord grounding pin. The grounding pin is an important safety feature.
- Insert the power plug into a grounded (earthed) electrical outlet that is easily accessible at all times.
- Disconnect power from the server by unplugging all power cords from either the electrical outlet or the server.
- Allow the internal system components and hard drives to cool before touching them.

To install the controller hardware in your server:

1. Perform a normal system shutdown, power down the server, and then power down the external storage units.
2. Power down any peripheral devices.
3. Remove all power cords from the server.
4. Open the server.
5. Install the controller board in an available 3.3-V PCI or PCI-X slot.
6. Connect internal hard drives to the new controller.
7. Close the server.
8. Reconnect all external cables to the server.

2. Updating the Firmware

You can update the firmware by downloading the Smart Components that can be found on the HP website, and then following the detailed instructions that are provided on the Web page containing the Smart Components.

Alternatively, if the server uses Microsoft Windows 2000 or Windows NT as the operating system, you can use the software CD that is provided in the controller kit to update the firmware.

NOTE: Some newer ProLiant servers automatically update the system and controller firmware when they are powered up for the first time. To determine whether this situation is true for a particular server, refer to the server-specific setup and installation guide.

To use the CD:

1. Insert the CD into the CD-ROM drive of the server.
If you want to run the firmware updates while offline, restart the server now, and then wait for controller initialization to finish.
The ProLiant Storage Software license agreement page is displayed.
2. Click **Agree**.
The main ProLiant Storage Software screen is displayed.
3. Click **ROM Update Utility**.
4. Click the **Updates** tab.
5. Select **Express** or **Custom** mode, and follow the on-screen prompts and instructions to update the firmware on the system and the controller.

IMPORTANT: If the server does not use RBSU, you now need to use the System Configuration Utility (SCU) to update the system partition.

3. Configuring the System

For most new servers, use the ROM-Based Setup Utility (RBSU) to configure the system.

If the system does not support RBSU, use the System Configuration Utility (SCU). Also, if the server was previously configured using SCU, you must now use SCU again to update the system partition. Refer to the server setup and installation guide for detailed instructions about using SCU. After using SCU, follow the procedure in "Setting the Controller Order" to confirm that the controller order is unchanged. Reset the controller order if necessary.



CAUTION: Do not use RBSU on a system that has already been configured using SCU. Data loss is likely to occur.

NOTE: Some newer ProLiant servers configure themselves automatically when they are powered up for the first time. To determine whether this situation is true for a particular server, refer to the server-specific setup and installation guide.

To use RBSU:

1. Power up the server.
2. During the few seconds that the monitor screen displays the RBSU prompt, press the **F9** key to start RBSU.
3. Follow the on-screen prompts and instructions to configure the system and to set the boot controller order.
4. Save the configuration and exit the utility.
5. Restart the server to apply the new settings.

4. Setting the Controller Order

If you did not use RBSU to set the controller order in "Configuring the System," use the Option ROM Configuration for Arrays (ORCA) utility to set it now.

1. Power up the server. When the monitor screen displays the ORCA prompt, press the **F8** key to start the utility.
2. Follow the on-screen prompts and instructions to set the boot controller order.
3. Save the configuration.
4. If you are not going to use ORCA to create logical drives, exit the utility.

5. Creating Logical Drives

If the system already contains logical drives and data, you do not need to create new logical drives at this point. Go directly to "Installing the Device Drivers."

NOTE: Some newer ProLiant servers automatically create a logical drive and configure a RAID level when they are powered up for the first time. For this sequence of events to occur, the server must have fewer than seven internal hard drives, and the boot drive must not have been written to. To determine whether this situation applies to a particular server, refer to the server-specific setup and installation guide.

If you are installing the controller in an unconfigured server, use ACU or ORCA to create at least one logical drive before installing the device drivers.

Detailed instructions for using ACU are given in the *HP Array Configuration Utility User Guide*. This guide is supplied on the same CD as the utility, or is downloadable from www.hp.com.

To use ORCA:

1. Power up the server. When the monitor screen displays the ORCA prompt, press the **F8** key to start the utility.
2. Follow the on-screen prompts and instructions to create logical drives.
3. Save the configuration and exit the utility.

6. Installing the Device Drivers

The device drivers are installed using one of the software CDs that are provided in the controller kit.

If you used the SmartStart Assisted Installation path to install the operating system on a new server, the drivers are automatically installed at the same time. You can also use SmartStart to update the drivers manually on older systems. For further information, refer to the SmartStart documentation.

If you used the Support Software CD, the procedure for installing the device drivers is different for each operating system. The procedure also depends on whether the system is new or already has an operating system loaded and contains user data. Detailed instructions are given in the booklet that is provided with the CD.

The installation is complete.

You may now create, modify, and format additional logical drives as desired.